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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,373	09/16/2003	John Zavilla	H0610.0349/P349	9408

24998 7590 06/23/2005

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EXAMINER

BROWN, JENNINE M

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 06/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/662,373	Applicant(s) ZAVILLA ET AL.	
	Examiner Jennine M. Brown	Art Unit 1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/1/05;3/25/04</u> . | 6) <input type="checkbox"/> Other: ____.  |

***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on 3/25/2004 and 2/1/2005 were considered by the examiner.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Nemeth, et al. (US 6288281 B1).

See entire document. Nemeth, et al. disclose a catalyst composition comprising an ionic liquid catalyst with N-containing heterocyclic and/or aliphatic organic cation (col. 3, l. 56-63), an inorganic anion derived from metal halides (col. 3, l. 52-56) or mixed metal halides and one or more Bronsted acids (col. 1, l. 24-col. 2, l. 21). The ratio of component (a) to (b) is also disclosed (col. 3, l. 45-51). Known anions disclosed are  $\text{AlCl}_4^-$ ,  $\text{Al}_2\text{Cl}_7^-$  (col. 1, l. 37).

Claims 1 and 8-10 rejected under 35 U.S.C. 102(b) as being anticipated by Wald (US 3501416 A).

See entire document. Wald discloses a process of isomerization of a paraffin such as hexane in the presence of a melt organic salt mixture catalyst containing N-methylpyridinium tetrachloroaluminate and a metal halide (aluminum chloride – table 5,

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example 3 uses an isomerization not cracking process) and the cracking catalyst formed in situ from  $\text{AlCl}_3$  and an alkylpyridinium (col. 3, l. 69-col. 4, l. 32) is the same as that claimed. The percentage of the two components is found on pages 2-4.

Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Keim, et al. (WO 00/16902 A1).

Keim, et al. disclose an ionic liquid (page 5, l. 24-page 6, l. 5) comprising an organo nitrogen (page 3, l. 26-31) or organo phosphorus (page 4, l. 4-9) compound with a Bronsted acid with a ratio of less than or equal to 1 used as an acid catalyst (page 1, lines 7-13, 17-20).

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-10 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-12 of copending Application 10/387545, now expressly abandoned. Although the conflicting

claims are not identical, they are not patentably distinct from each other because both claim a process for the isomerization of paraffin hydrocarbon feed in the presence of a composite catalyst containing an ionic liquid and metal salt and both claim the composite catalyst therein. The instant claims are a genus of the species claimed in the copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1, 8-10 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 of US Patent 6,797,853 B2.

Although the conflicting claims are not identical, they are not patentably distinct from each other because both claim a process for the isomerization of paraffin hydrocarbons catalyzed by an ionic liquid catalyst in the presence of one or more hydrocarbons wherein the cation of the liquid catalyst is an N-aliphatic moiety with one or more alkyl groups such as an ammonium compound and/or an alkyl substituted pyridinium, piperidinium or quinolinium compound wherein the anion is derived from a metal halide with strong Lewis acidic properties and wherein the ratio of cation to anion is from 1:3 to 1:0.5 and the metal halide is selected from  $\text{AlCl}_4^-$ ,  $\text{AlBr}_4^-$ ,  $\text{GaCl}_4^-$ ,  $\text{Al}_x\text{Cl}_{3x+1}^-$ ,  $1 < x < 2$  and  $\text{Al}_x\text{Cl}_{3x}\text{Br}^-$ ,  $1 < x < 2$  wherein the process temperature is between  $-30$ - $150$  degrees C and pressure is from 1-60 bar. The prior art appears to disclose the invention as claimed on the basis of inherent property characteristics and would have

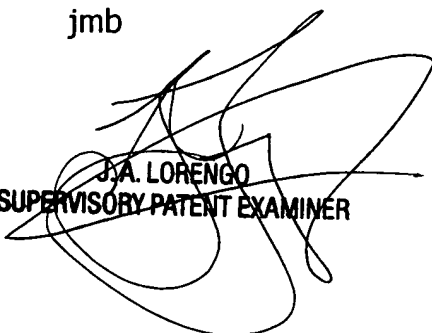
been obvious to one of ordinary skill in the art because one catalyst composition may be used in a multitude of different catalytic process as evidenced in Chemical Reviews (1999), 99, 2071-2083 as disclosed by applicant.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennine M. Brown whose telephone number is (571) 272-1364. The examiner can normally be reached on M-R 9:30 AM - 7:30 PM; Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jmb

  
J.A. LORENGO  
SUPERVISORY PATENT EXAMINER